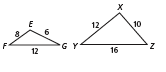
**Warm-up**

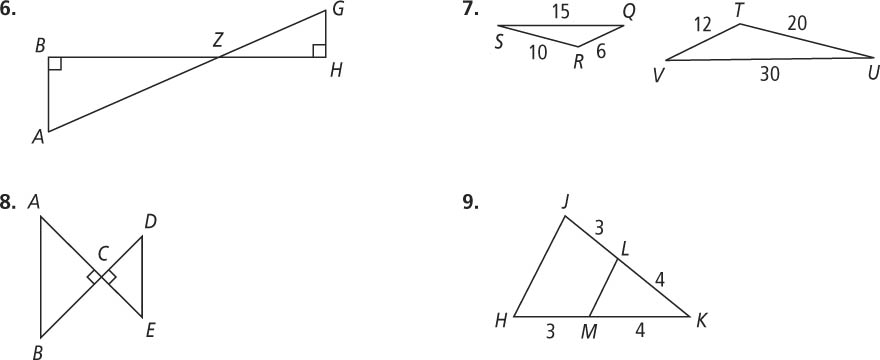
For each problem, determine the missing side length(s) if the two figures are similar.

Complete the following steps for each unknown variable:

Step 1: Set up a proportion that involves the unknown side length.

Step 2: Cross multiply.

Step 3: Solve for the unknown side length1. 2.

****

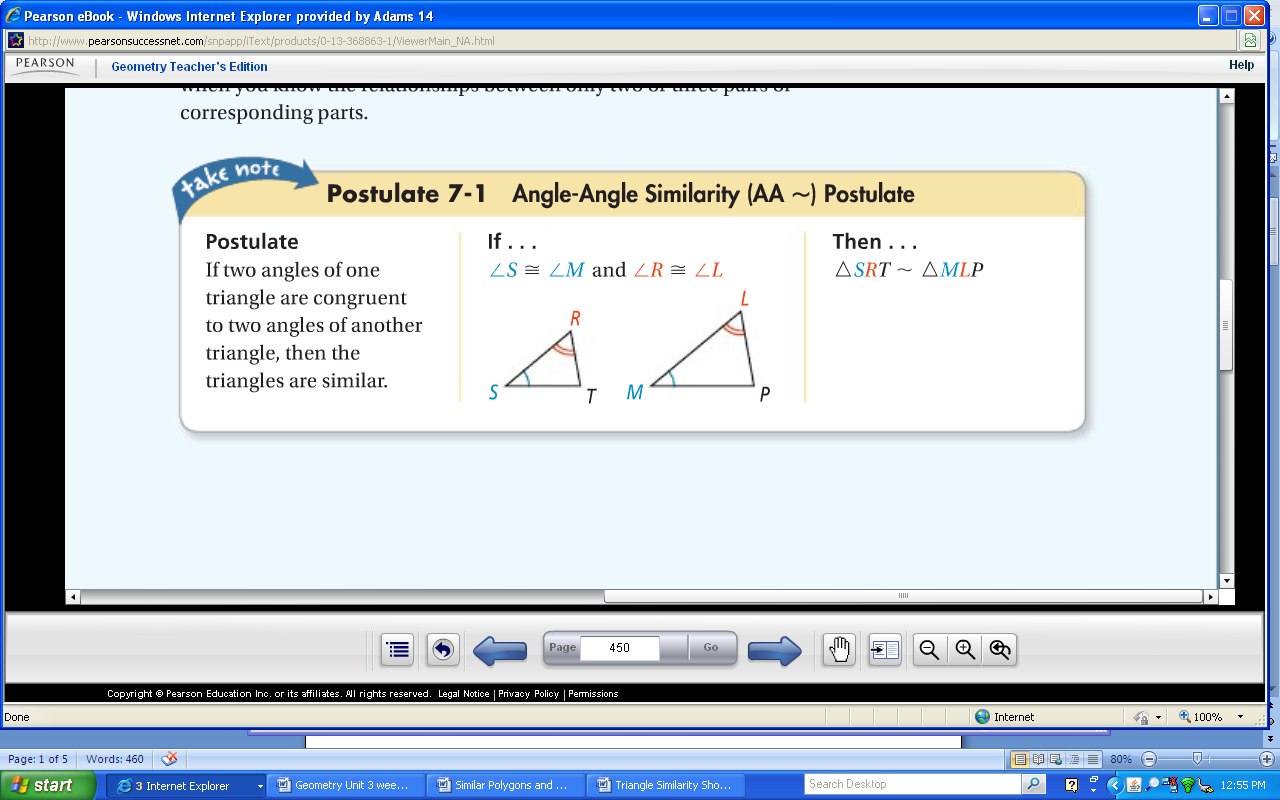
n

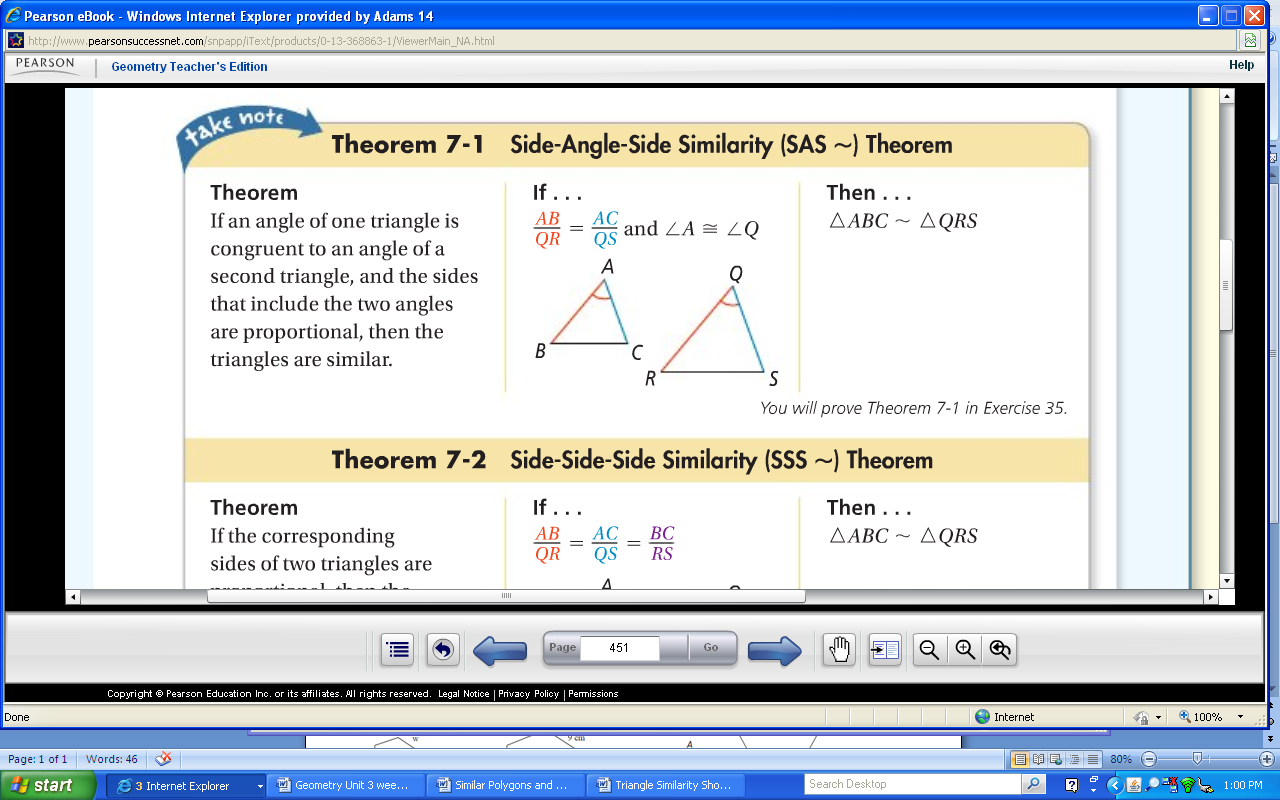
x

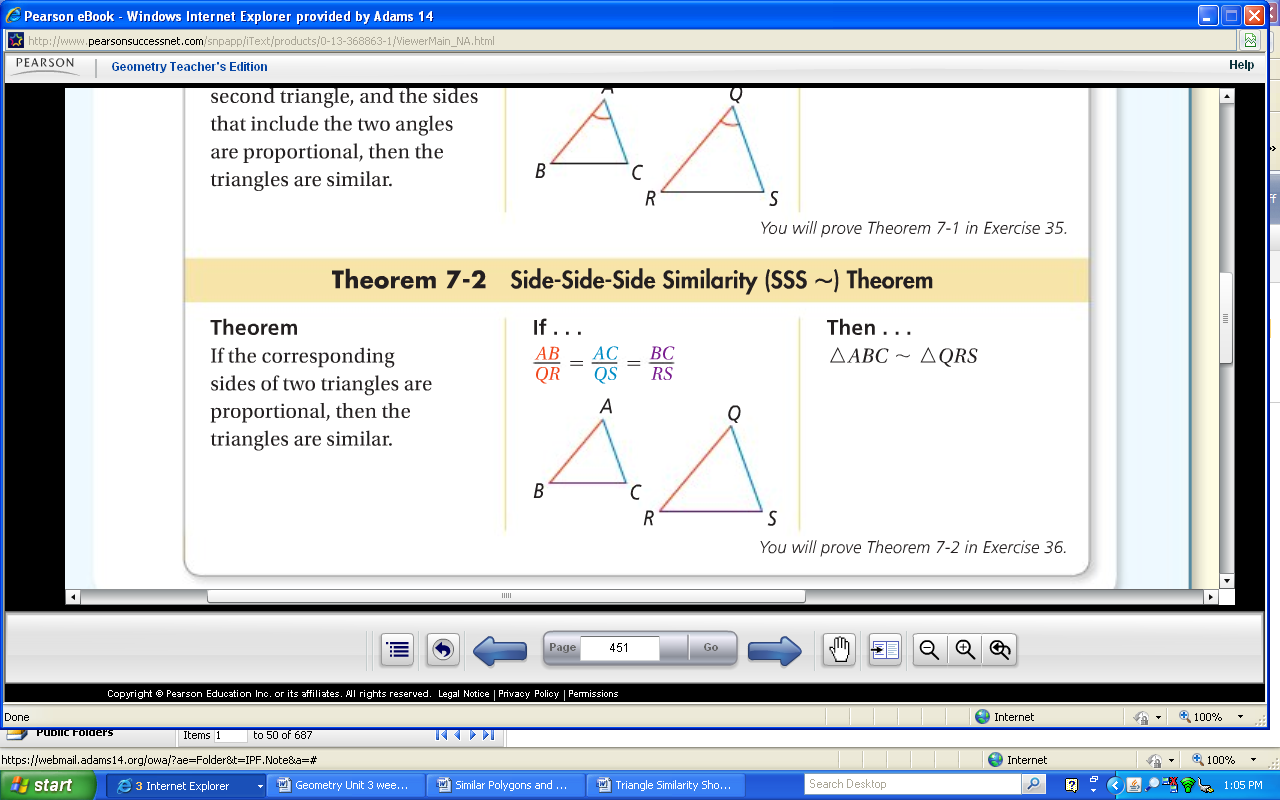
Recall: If two polygons are similar, than the ***corresponding angles are congruent*** and the ***lengths of corresponding sides are proportional***.

Angle-Angle Similarity (AA ~)

Two triangles are similar if two angles in one triangle are congruent to two angles in the other triangle.

Side-Angle-Side Similarity (SAS ~)

Two triangles are similar if an angle of one triangle is congruent to an angle of a second triangle, and the sides that include the two angles are proportional. Side-Side-Side Similarity (SSS ~)

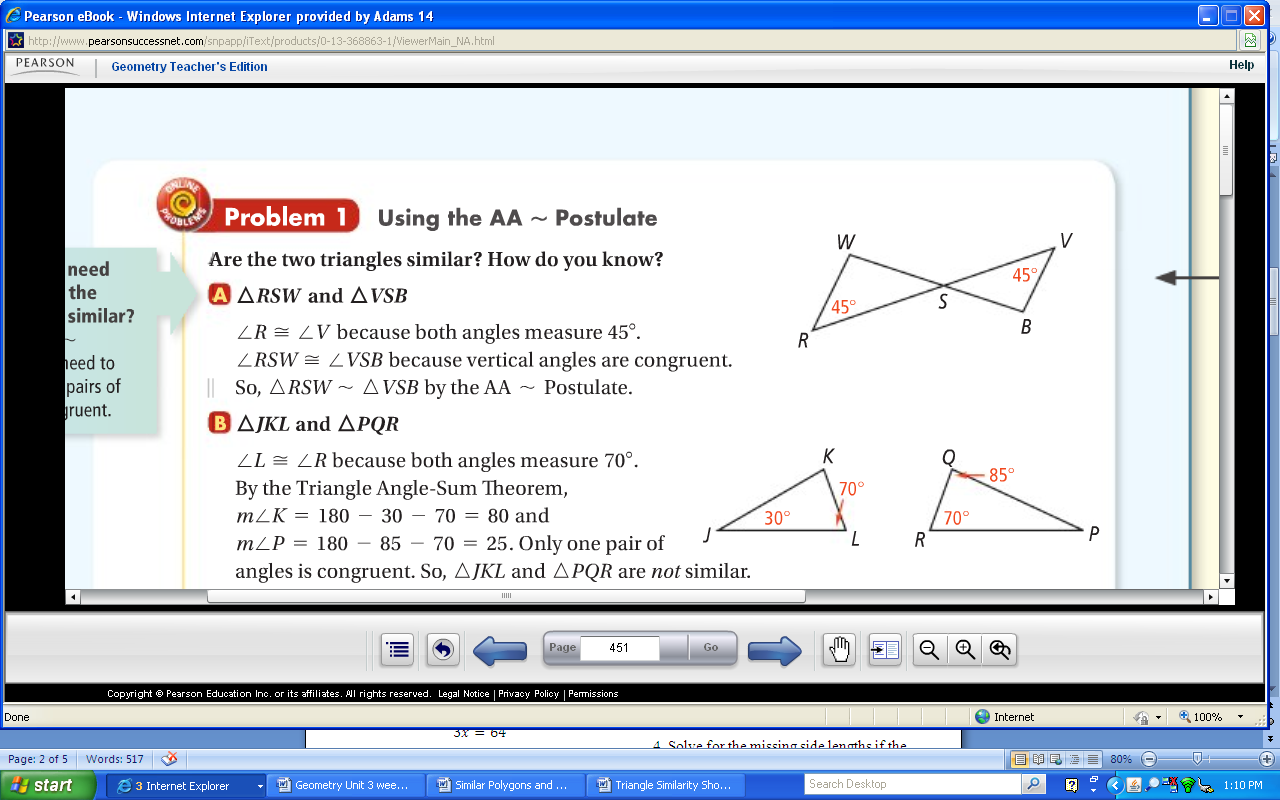
Two triangles are similar if the corresponding sides of two triangles are proportional. 

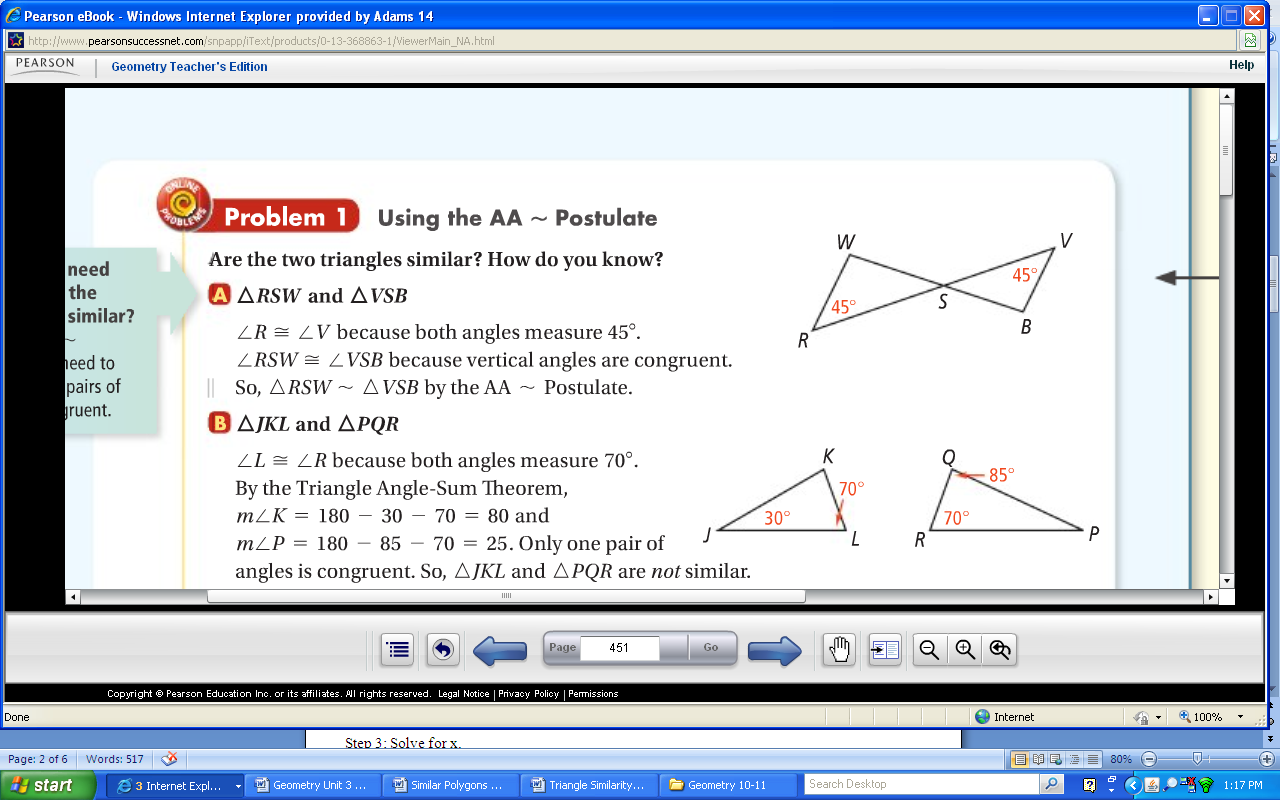
I Do

We Do

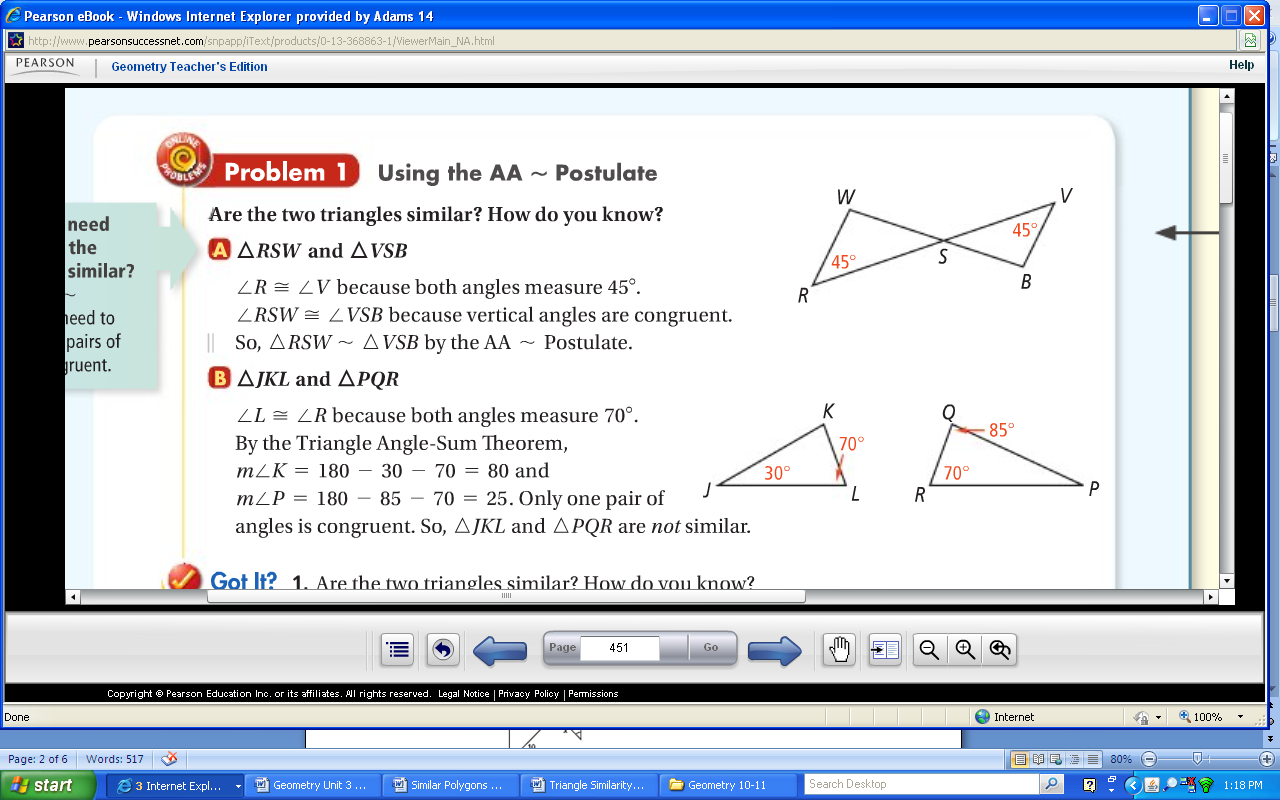
Determine if the two triangles are similar. Show your work and state what shortcut you are using to determine their similarity.

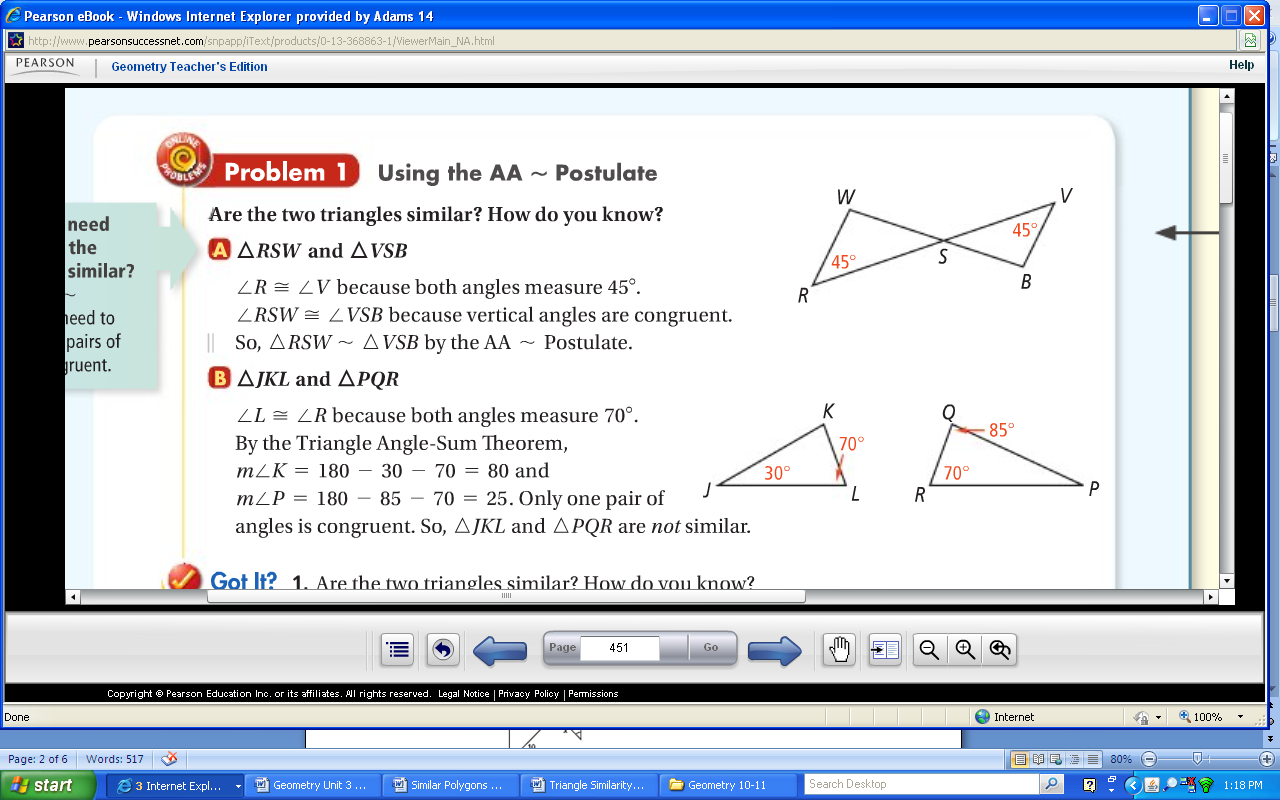
1.



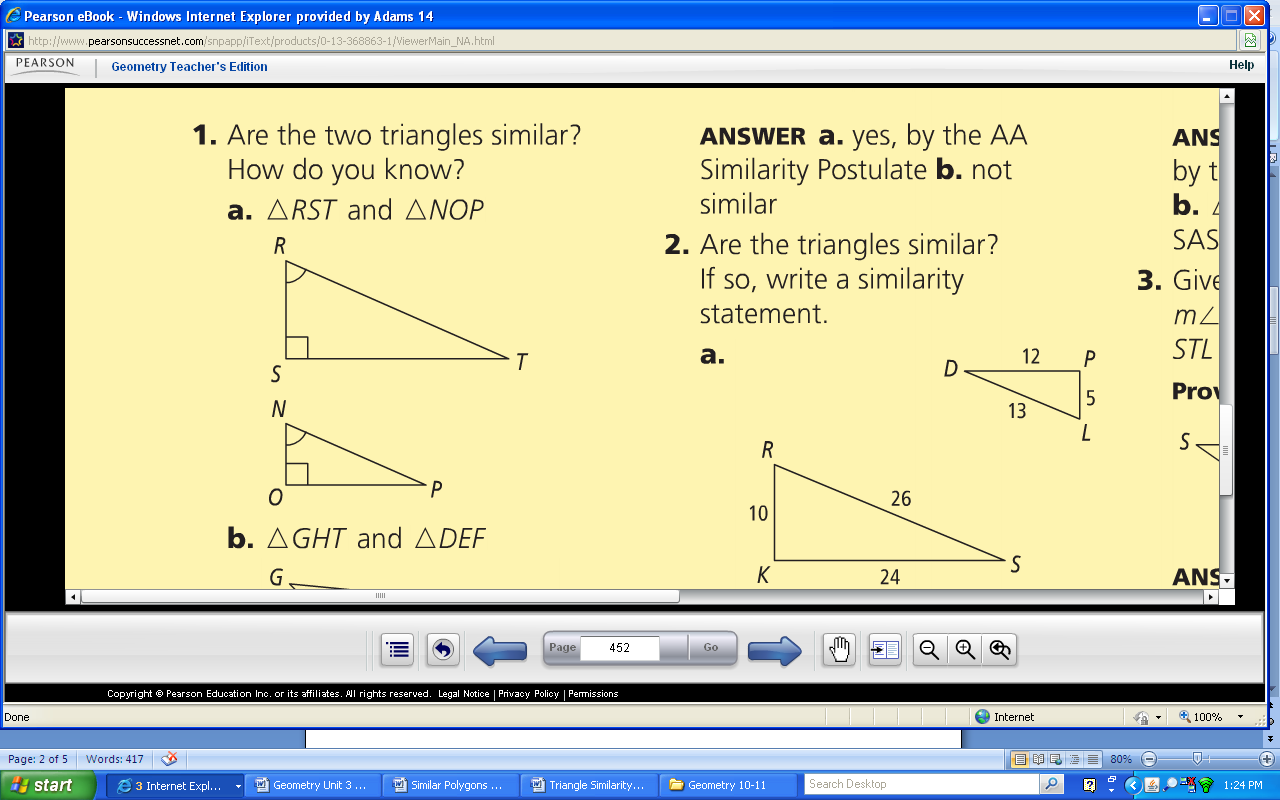


2.

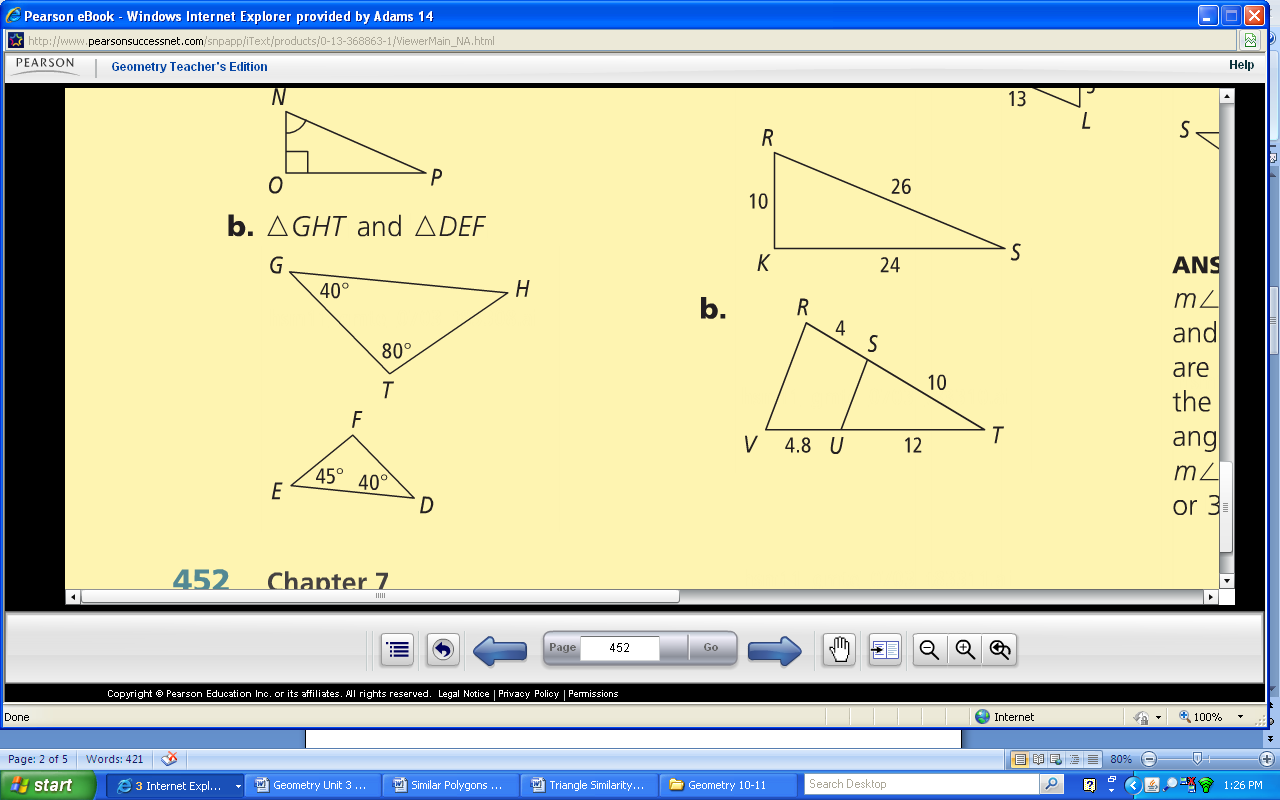


Determine if the two triangles are similar. Show your work and state what shortcut you are using to determine their similarity.

3.

 Yes, by AA ~

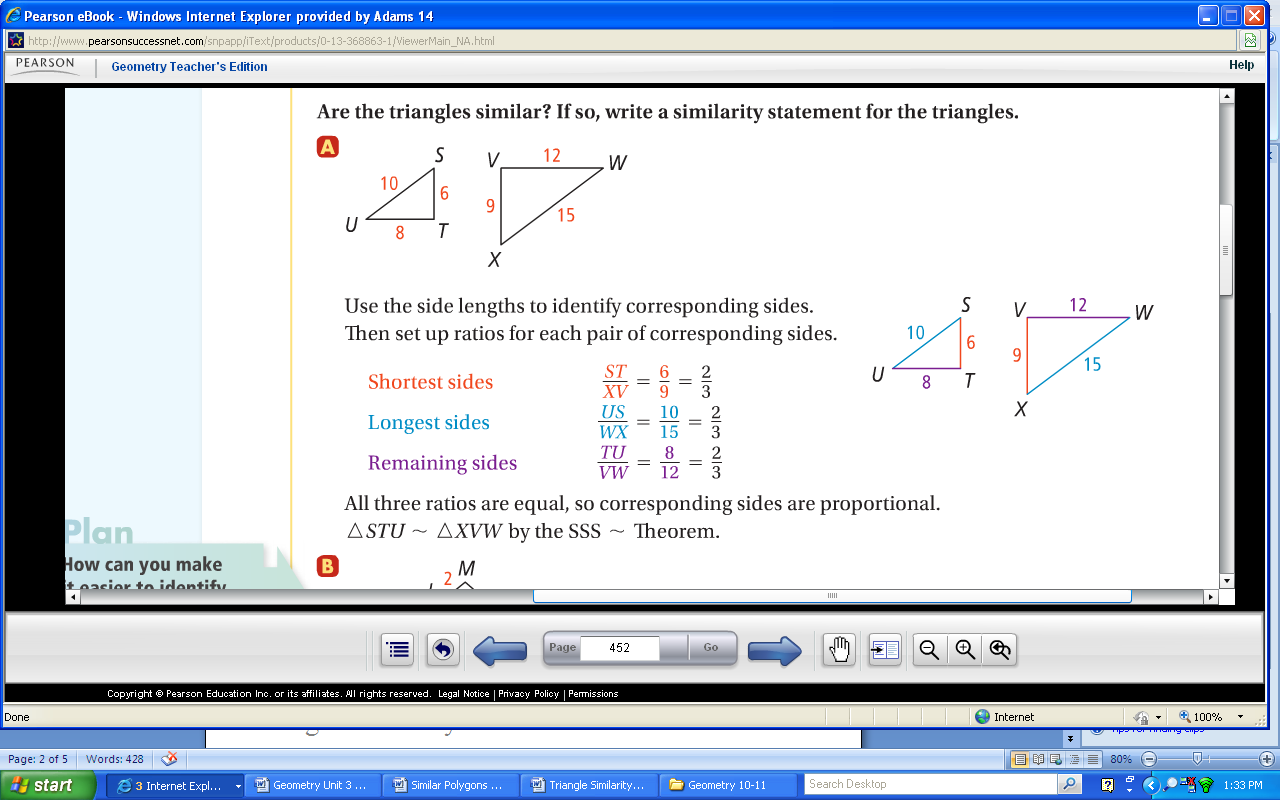
4.

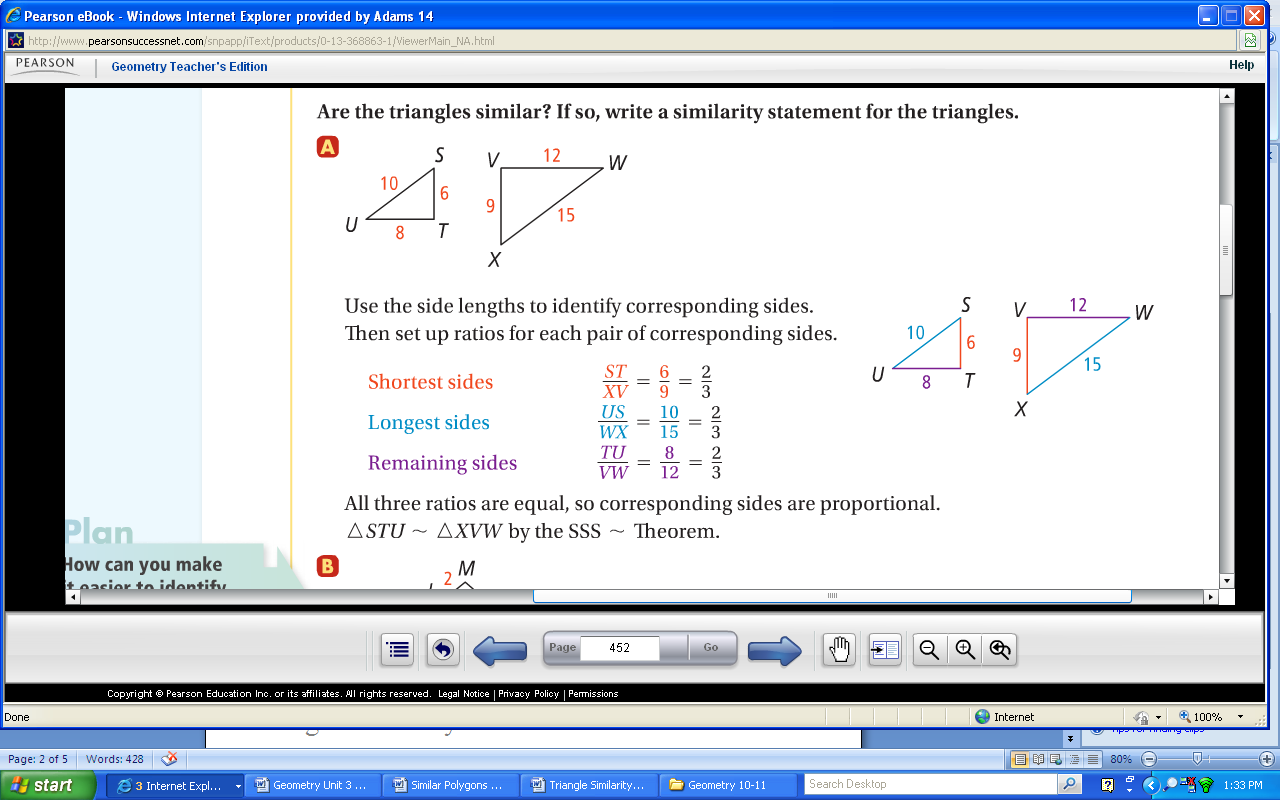


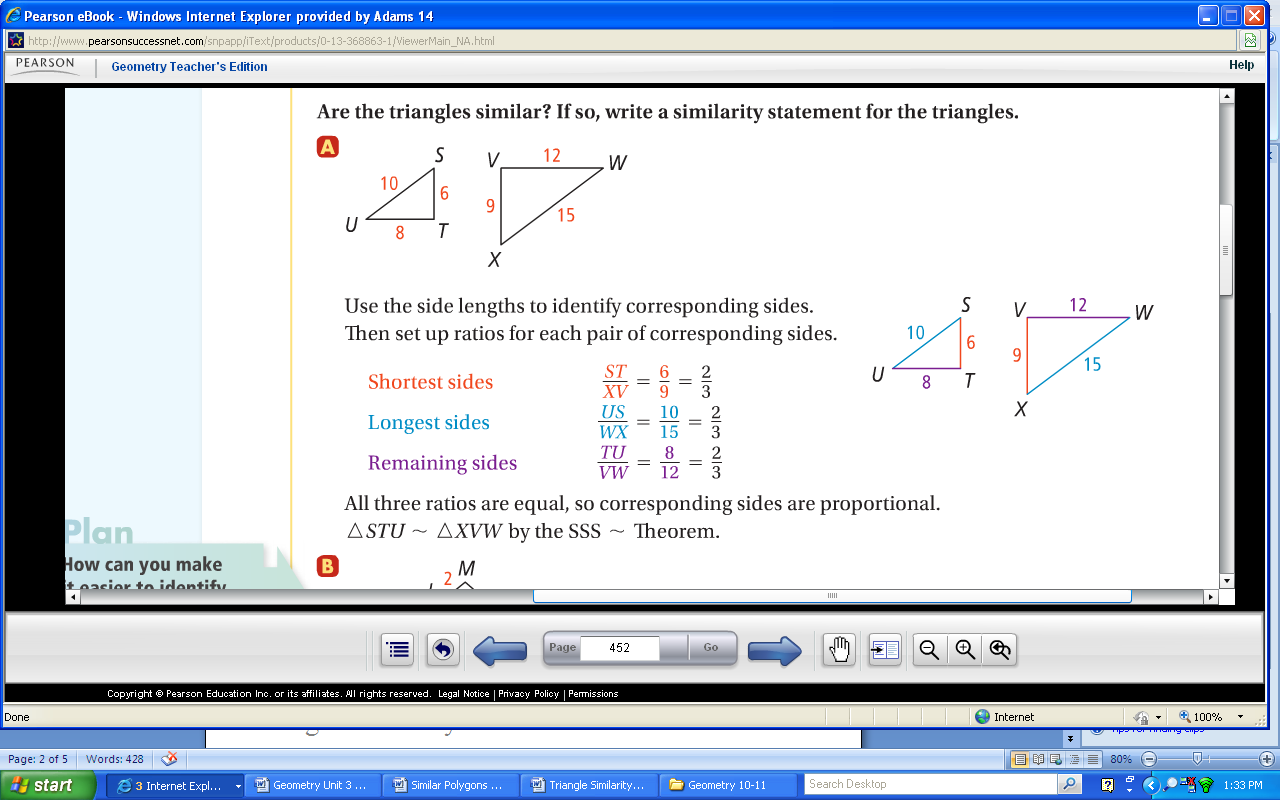
No, only one angle is congruent

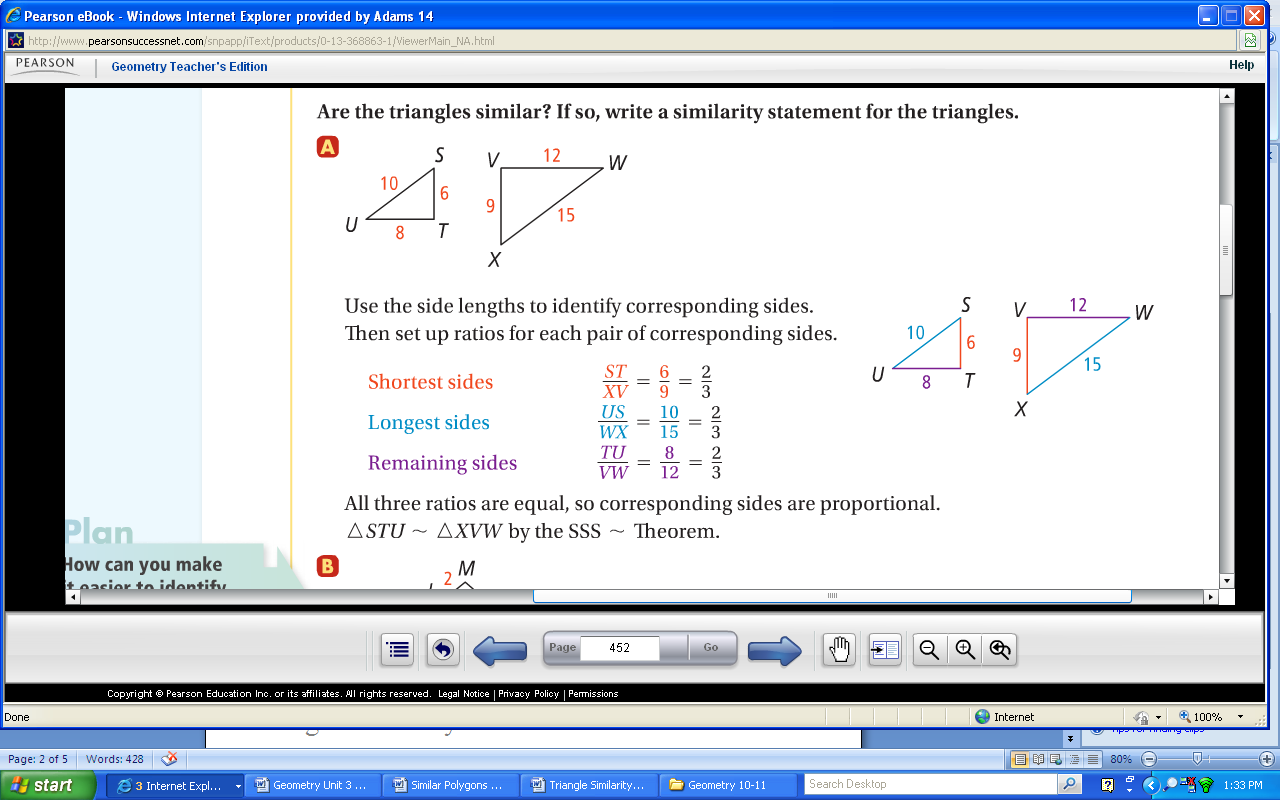
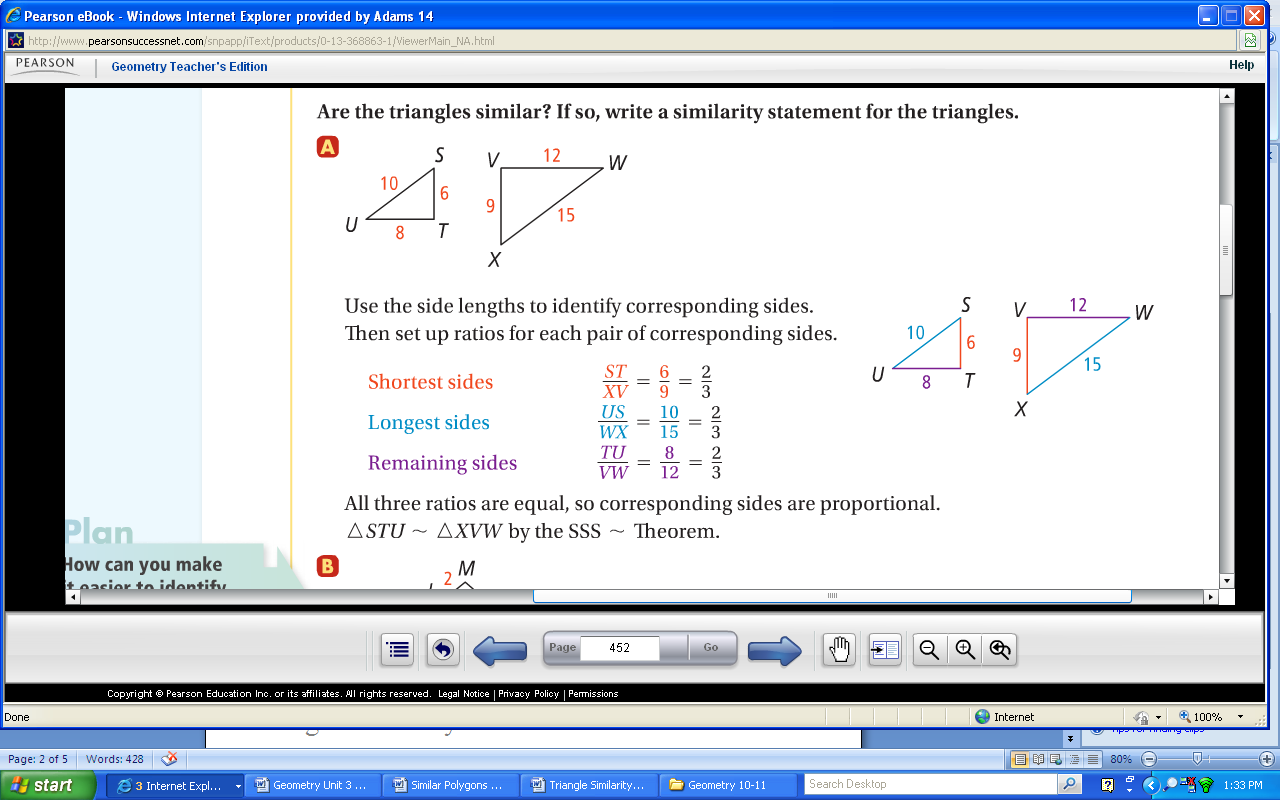
I Do

5.

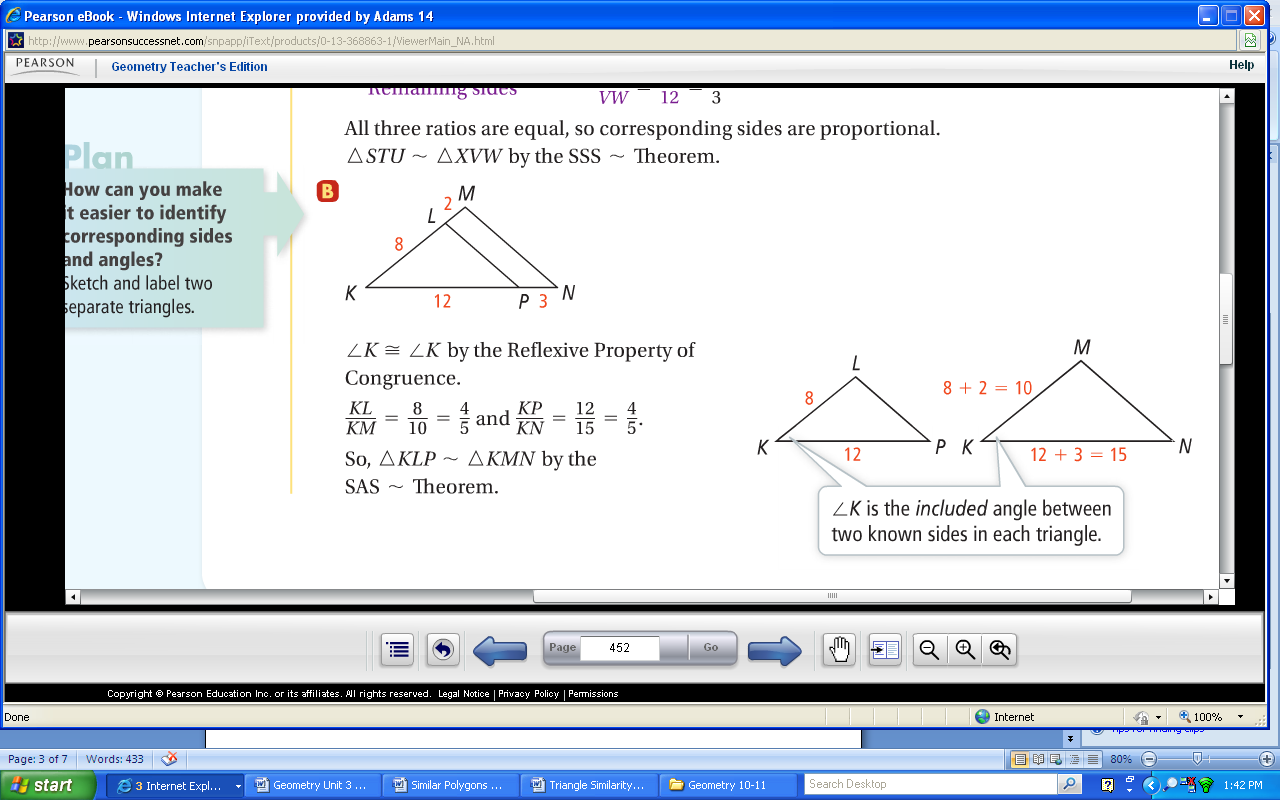
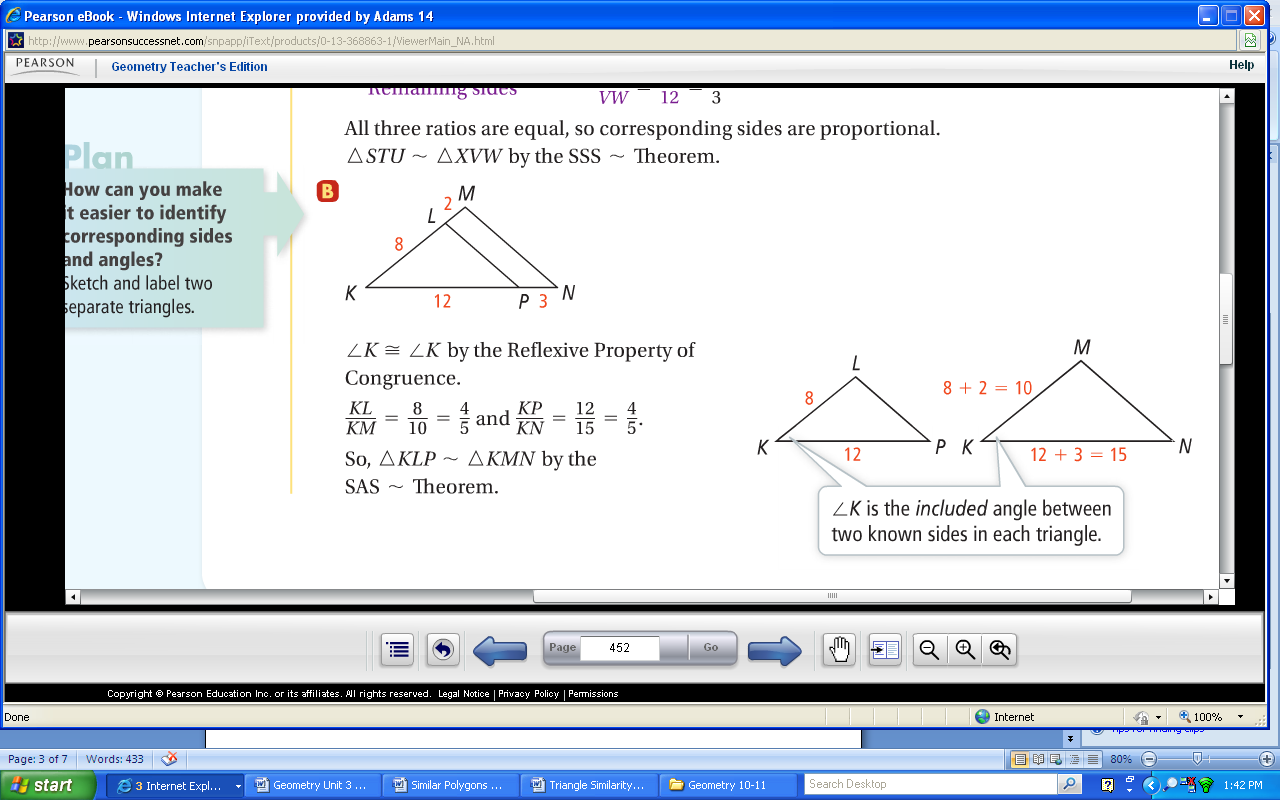
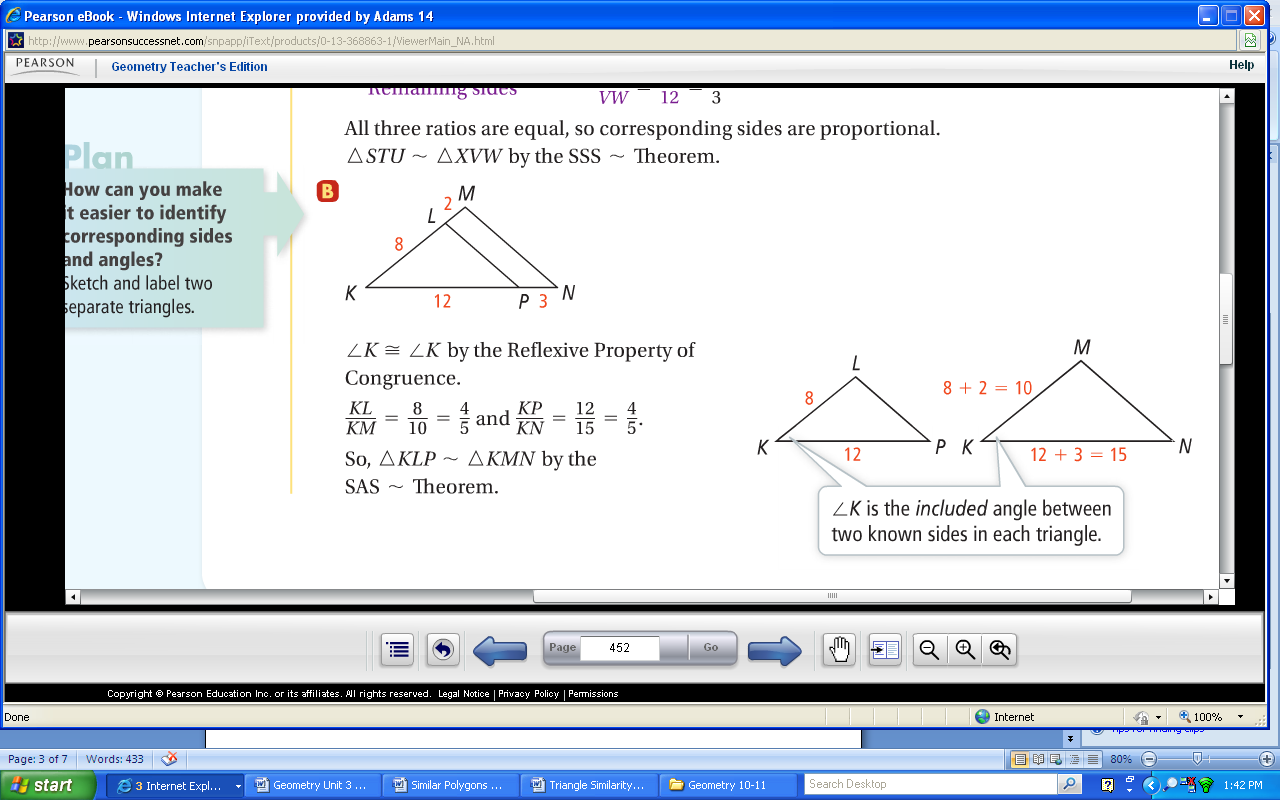




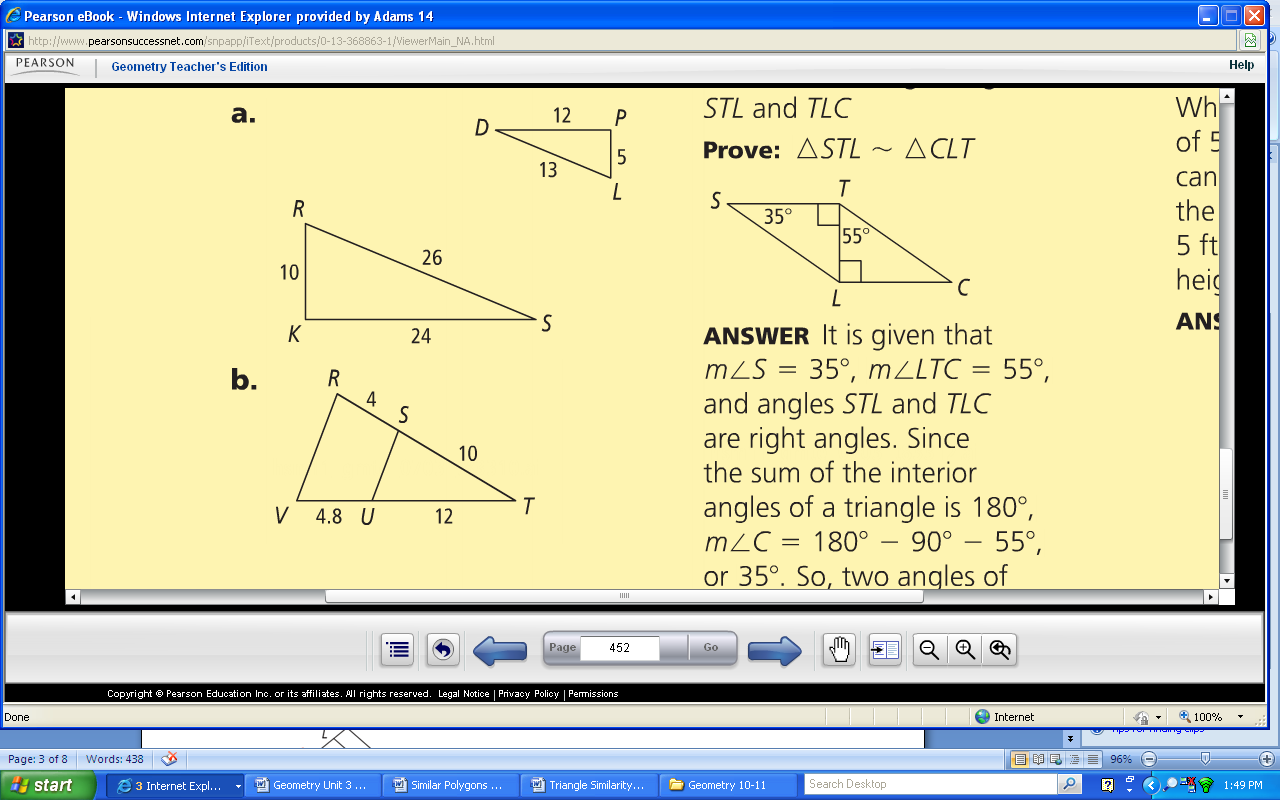




7.

We Do

6.



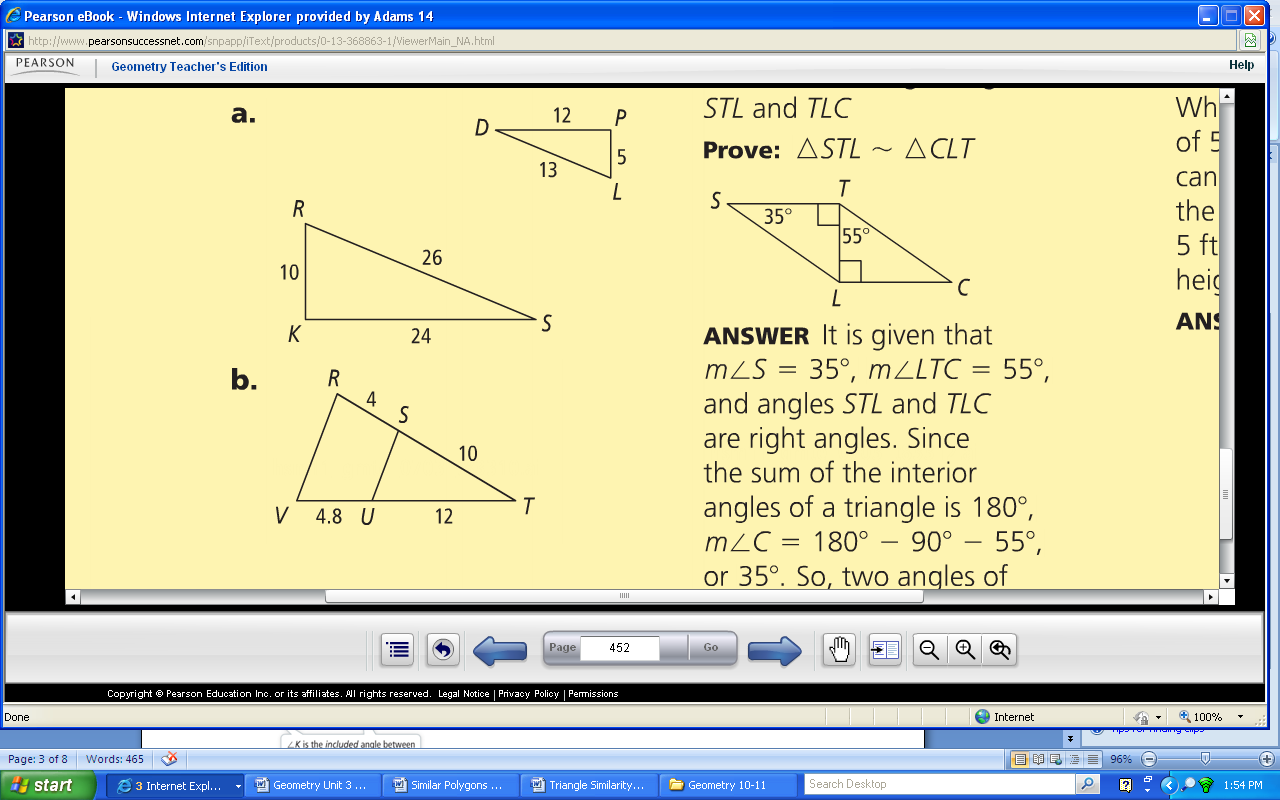
Shortest sides

Longest sides

Remaining sides

All three ratios are equal, so corresponding sides are proportional. DPL ~ SKR by SSS~

8.



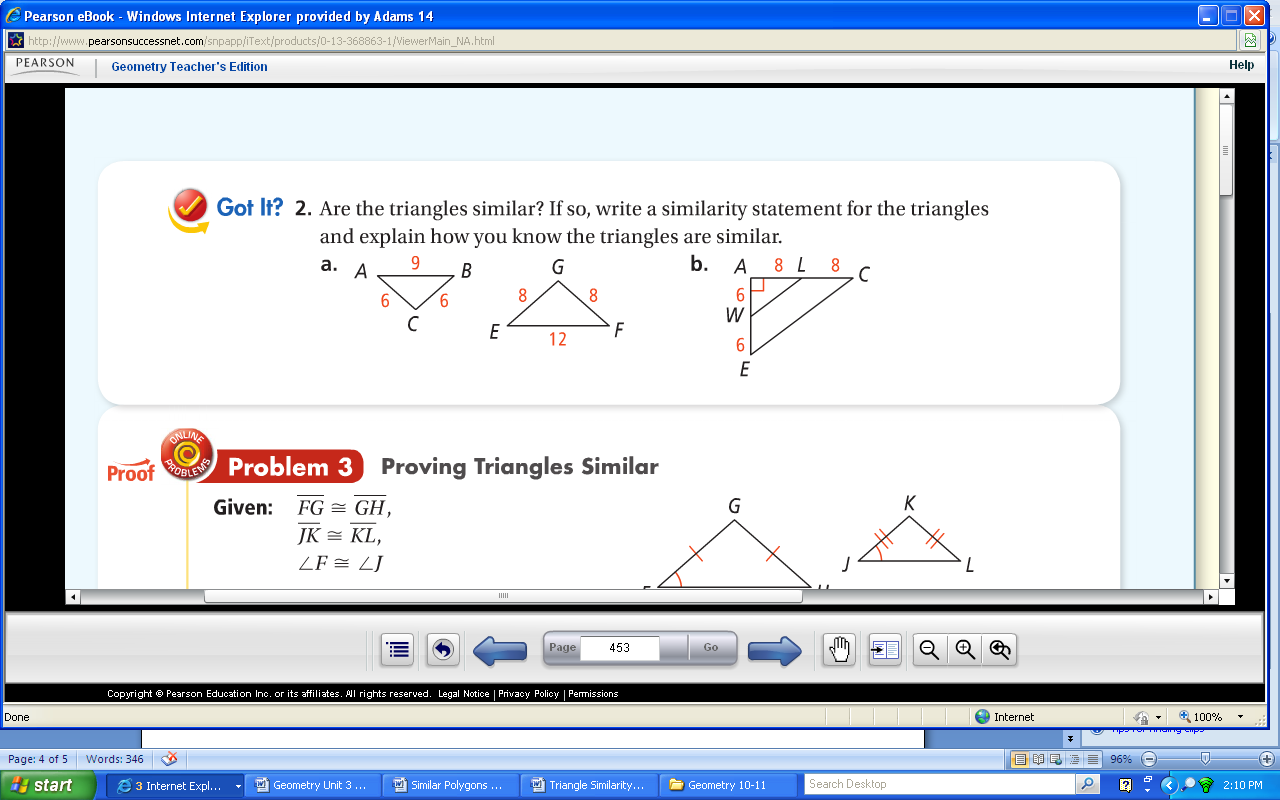
and

TSU ~ TRV by SAS~

Final Check

Determine if the two triangles are similar. Show your work and state what shortcut you are using to determine their similarity.

9.



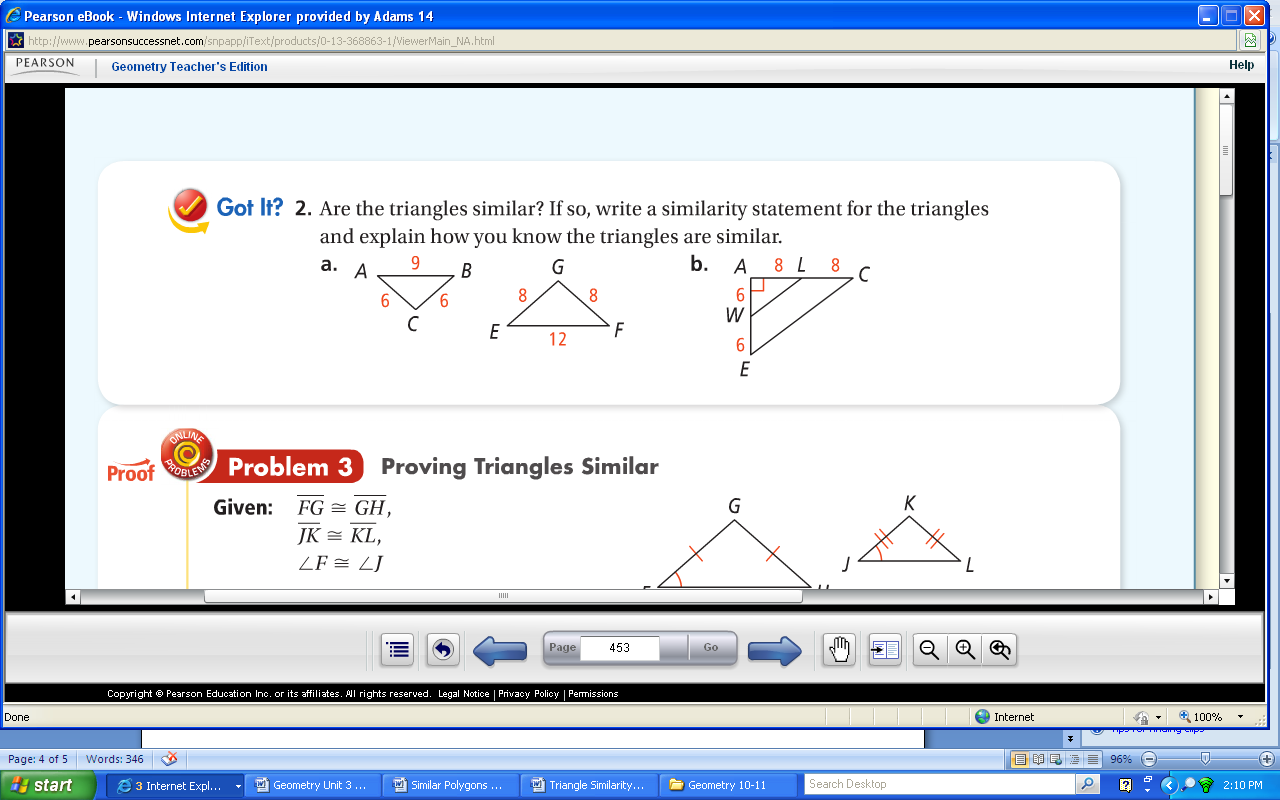
Shortest sides

Longest sides

Remaining sides

All three ratios are equal, so corresponding sides are proportional. ABC ~ EFG by SSS~

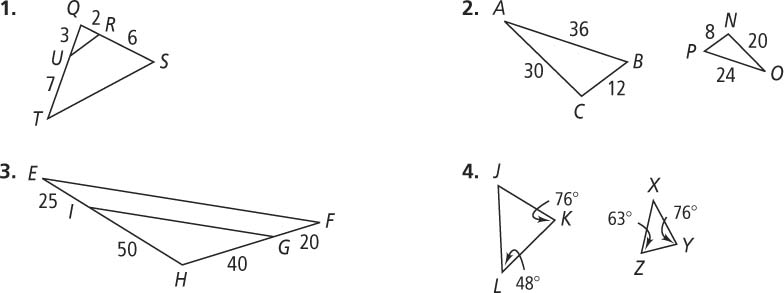
10.

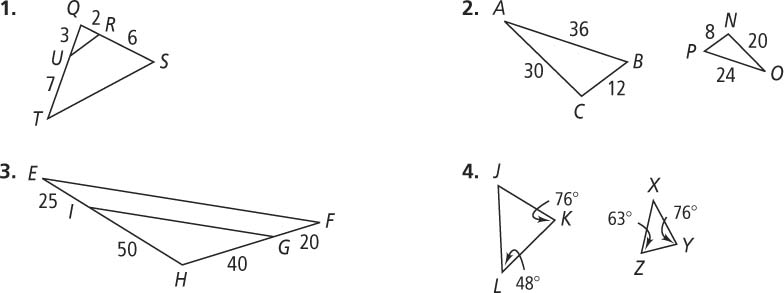


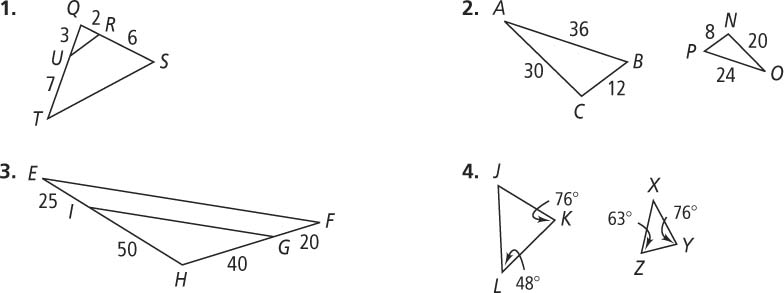
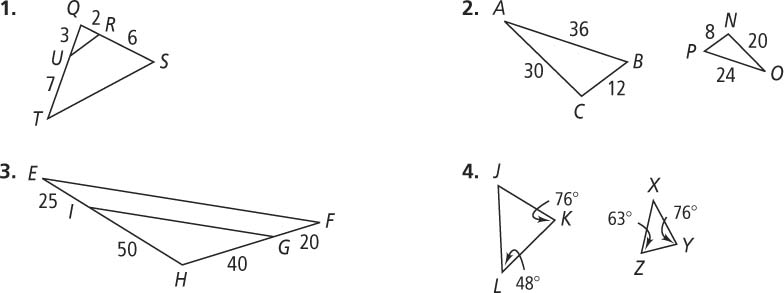
and

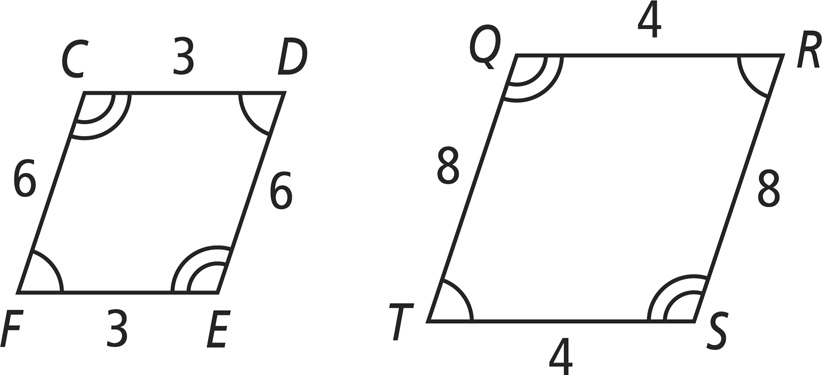
AWL ~ AEC by SAS~

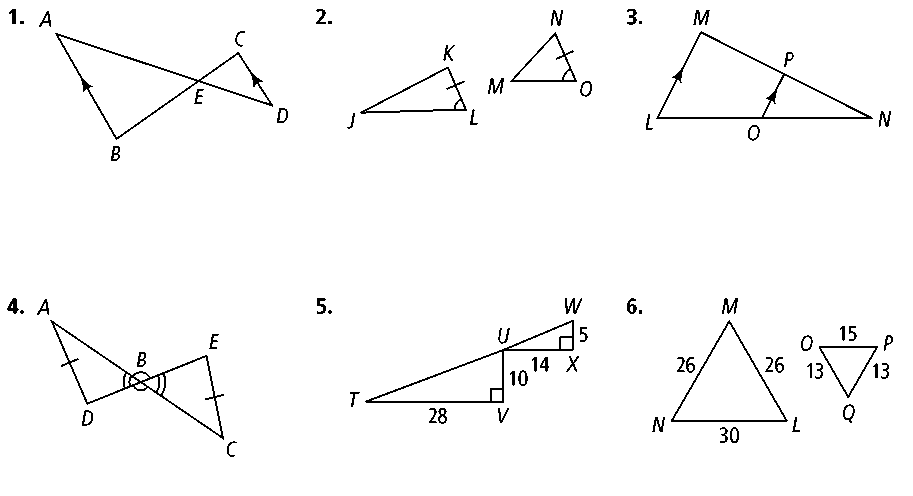
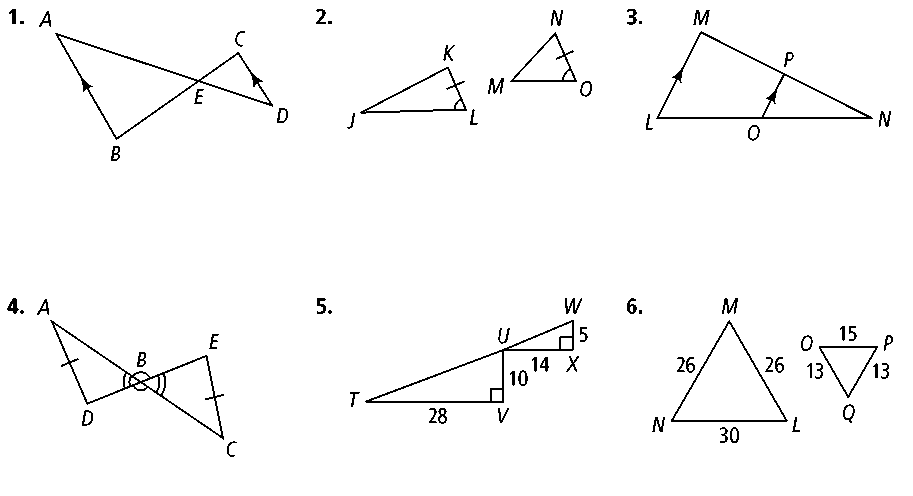
Determine whether the triangles are similar. If so, write a similarity statement and name the postulate or theorem you used. If not, explain.

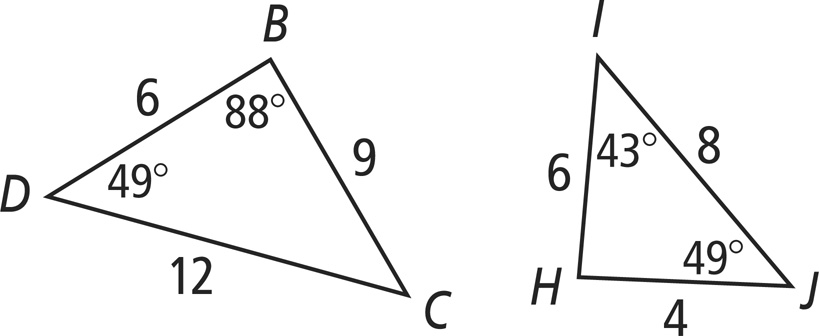


1. 2.



3.  4.



5. 6.